

INTRODUCTION

SECTION II - FORESTLAND INTERPRETATIONS

Soil interpretations for forest land suitability are made for all areas in which forest is the present or potential land use. The Woodland Ordination Symbol is a tool used for evaluating existing conditions and predicting the soil response to various systems of forest land management.

Woodland Ordination Symbol

The ordination symbol has two parts: The class and subclass.

Example: 9A CLASS SUBCLASS
 | |
 9 A

Ordination Class Symbol

Productivity Class. The first element in ordination is a number that denotes potential productivity in terms of cubic meters of wood per hectare per year for an indicator tree species. The larger the number, the greater the potential productivity. Most woodland productivity values have been obtained from conversion of site index data. A mean annual increment of one cubic meter per hectare equals 14.3 cubic feet per acre (for quick conversion a factor of 15 may be used). Examples:

1 means 1 cubic meter per hectare per year (14.3 cu.ft./ac)

2 means 2 cubic meters per hectare per year (28.6 cu.ft./ac)

10 means 10 cubic meters per hectare per year (143 cu.ft./ac)

Indicator Species. The indicator species is the species that is common in the area and is generally, but not necessarily, the most productive on the soil. It is the species that determines the ordination class. To make comparisons of productivity consult the "Woodland Productivity Table" which lists productivity for all species where data have been collected.

Site Index. Site index is determined by taking height measurements and determining the age of selected trees within stands of a given species. This index is the average height, in feet, that the trees attain in a specified number of years. This index applies to fully stocked, even aged, unmanaged stands. Site indexes shown in the woodland productivity table are averages based on measurements made at sites that are representative of the soil series and where the site has been free of past fire and disturbances. When comparing site index and woodland productivity of different soils, the values for the same tree species should be compared.

Ordination Subclass Symbol

The second element or subclass is indicated by a capital letter, which indicates certain soil or physiographic characteristics that contribute to important hazards or limitations in management. These are listed and defined on the following page.

Ordination Subclass Definitions and Implications

Subclass "R" (relief or slope steepness).

Soil that have restrictions or limitations for forest land use or management because of steepness of slope.

Subclass "X" (stoniness or rockiness).

Soils that have restrictions or limitations for forest land use or management because of stones or rocks.

Subclass "W" (excessive wetness).

Soils in which excessive water, either seasonally or year round, causes significant limitations for forest land use and management. These soils may have restricted drainage, a high water table, or flooding hazard that adversely affects either stand development or management.

Subclass "T" (toxic substances).

Soils that have within the root zone excessive alkalinity, acidity, sodium salts, or other toxic substances that limit or impede development of desirable species.

Subclass "D" (restricted rooting depth).

Soils that have restrictions or limitations for forest land use and management because of the rooting depth. For example, soils that are underlain by hard rock, hardpan, or other layers in the soil that restrict roots.

Subclass "C" (clayey soils).

Soils that have restrictions or limitations for forest land use or management because of the kind or amount of clay in the upper part of the soil profile.

Subclass "S" (sandy soils).

Dry, sandy soils that impose equipment limitations, have low moisture holding capacity, and normally are low in available plant nutrients.

Subclass "F" (fragmental or skeletal soils).

Soils that have restrictions or limitations for forest land or management because they contain large amounts of rock fragments that are larger than 2 mm and smaller than 10 inches. This subclass includes flaggy soils.

Subclass "A" (no limitations or slight limitations).

Soils that have no significant restrictions or limitations for forest land use or management.

Multiple Limitations

Some soils may have more than one limiting characteristic, but only one symbol will be used. Priority in placing each kind of soil into a subclass must be in the order in which the subclass characteristics are listed above. Plant competition and special considerations are not to be used to determine subclass.